



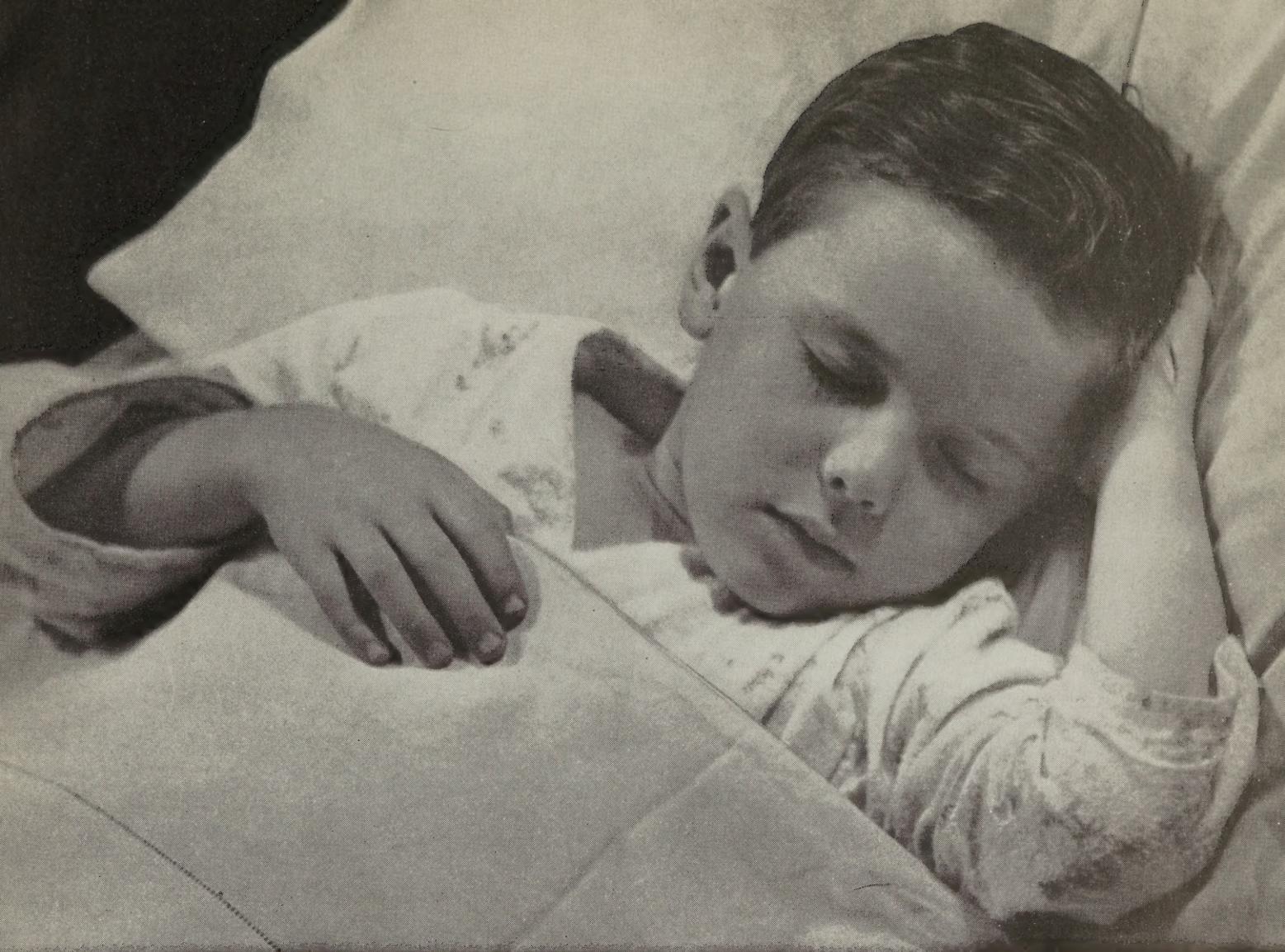


J O R E W O R D

TEN, or even five years ago, the scientific insulation of homes was practically unknown. Fortunate indeed was the man who could build his house under the shelter of a hill to break the force of winter's winds, or within the shade of tall trees to give some measure of protection from summer's glaring sun.

Today, however, home insulation has become an exact science. Johns-Manville, for over 77 years the leader in the field of industrial insulation, has perfected a method of insulating homes that has completely changed old standards of living comfort. Your home, regardless of its age, and whether it be clapboard, brick veneer, stucco, or shingled, can be made a far more comfortable place to live in than you ever dreamed possible.

But—and this is important—it is *only* through the scientific application of the correct insulating material that these results can be obtained. To insure your receiving all the benefits that go with a properly insulated home, Johns-Manville entrusts this work only to qualified insulating engineers. These men, located in all leading cities, employ the special trouble-free pneumatic process by which J-M Rock Wool Home Insulation has been successfully installed in many thousands of homes throughout the country. Johns-Manville heartily endorses their ability to insulate your home in the most efficient manner known to modern science.



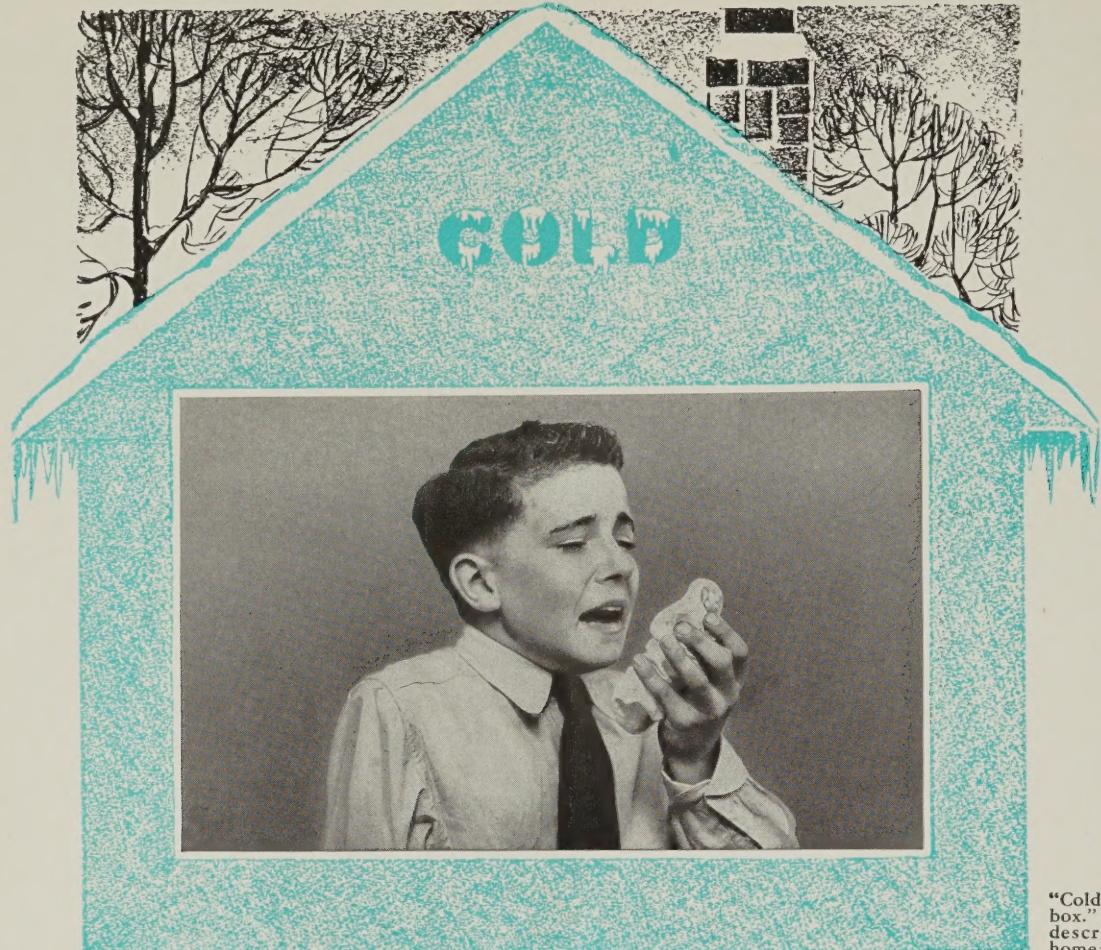
WHAT PRICE COMFORT?

YOU spend your life seeking bodily comfort for yourself and for your family, because you know that better health and happiness will result. Actually, you are seldom conscious of being *comfortable*, but you instantly realize when you are uncomfortable. You like to live, work, play, eat and sleep in comfortable places, and comfort to a large degree is governed by *temperature*. When you feel cold, you seek warmth. When you are hot, you seek coolness.

Most people think that they live in comfortable houses, but actually this is far from true. Many dwellings are little more than shelters from wind

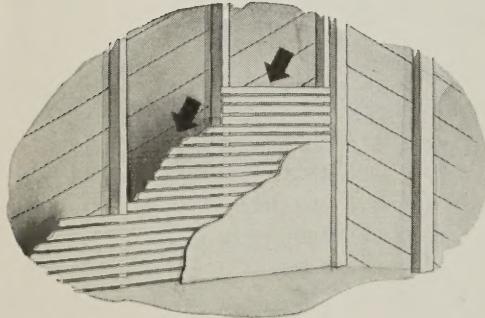
and rain. In spite of the most modern heating systems, there are usually cold, drafty, hard-to-heat places in winter. And in summer, the hot rays of the sun heat the interiors so that they remain extremely uncomfortable long after sundown.

The purpose of insulating a house is to help prevent summer heat from *penetrating* through walls and roofs, and to help prevent interior heat in winter from escaping to the cold air outside. When this is scientifically done, houses are comfortable the year 'round and become healthier and more pleasant places in which to live.



"Cold as an ice box." Does this describe your home in winter?

No WONDER HOUSES BECOME UNCOMFORTABLE



If you took the plaster and lath off your walls, this is what you would see—virtually four inches of heat-stealing space. Only by filling this space with a heat-resisting material can this defect be overcome.

LET'S see if we can't find out from the way your house is built why it perhaps does not offer you everything you could desire as protection against the weather. Starting from the interior, just what is there between you and the outdoors to shield you and your family from extremes of heat and cold?

First, if your home is of typical construction, there is a plaster wall—a thin layer of plaster about $\frac{3}{4}$ of an inch thick held in place by strips of wood lath or some other form of plaster base. Now suppose you were to cut a hole in this inside wall and explore further. What would you find? Simply another thin wall, separated from the first one by about four inches of space, and made up of a thin layer of wood (the sheathing) to which are fastened the clapboards, shingles or brick that form the exterior side walls of your home.

And that's all—only a thin wall, a 4" hollow air space, and another thin wall between you and the weather! Overhead, you've got practically the same condition with the open attic corresponding to the

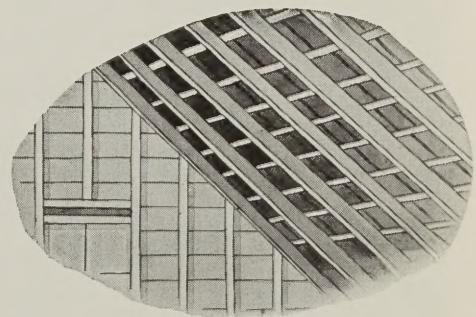


Homes that are hard to heat in winter are also hot in summer.

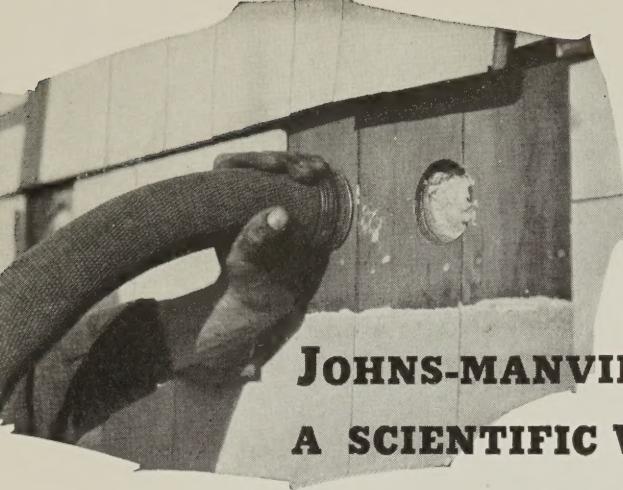
air space between the walls, and with the roof taking the place of the exterior side wall, although not providing as much thickness.

Now let's see what happens! In summer the sun beats against your roof and walls. They heat up quickly (often to 150°). Put your hand on them at noon on a July day and see. This heat seeps through into the attic and into the hollow space between the inner and outer side walls. If you question this, go up in the attic in mid-summer (often it is 115°). Remember too, the wall space gets just as hot. So, actually your rooms are surrounded by a layer of stifling hot air. It doesn't take long for the thin inner shell of lath and plaster to absorb a lot of that heat and pass it on into your rooms. *And here is the worst of it:*—at night the stored-up heat in the hollow pocket around your house escapes to the outer air *very slowly*. That is why it takes so long after sundown for your rooms to cool.

In winter the hollow pocket around your house is full of *cold* air. The result is that the heat in your rooms seeps through the thin shell of lath and plaster into this cold air pocket where it easily passes on through to the outdoors and becomes wasted. That is why you have cold floors and drafty rooms. And to make matters worse, on a windy day, this whole wasteful process is speeded up—the wind actually steals the heat from your house. That is why houses are doubly hard to keep comfortable on winter days with a cold north wind blowing.



Small wonder that attics become stifling hot on a summer day, when their only protection against the sun is a thin layer of shingles. The floor, too, affords only slight protection for the bedrooms below.



JOHNS-MANVILLE ENGINEERS HAVE DISCOVERED A SCIENTIFIC WAY TO MAKE HOMES COMFORTABLE

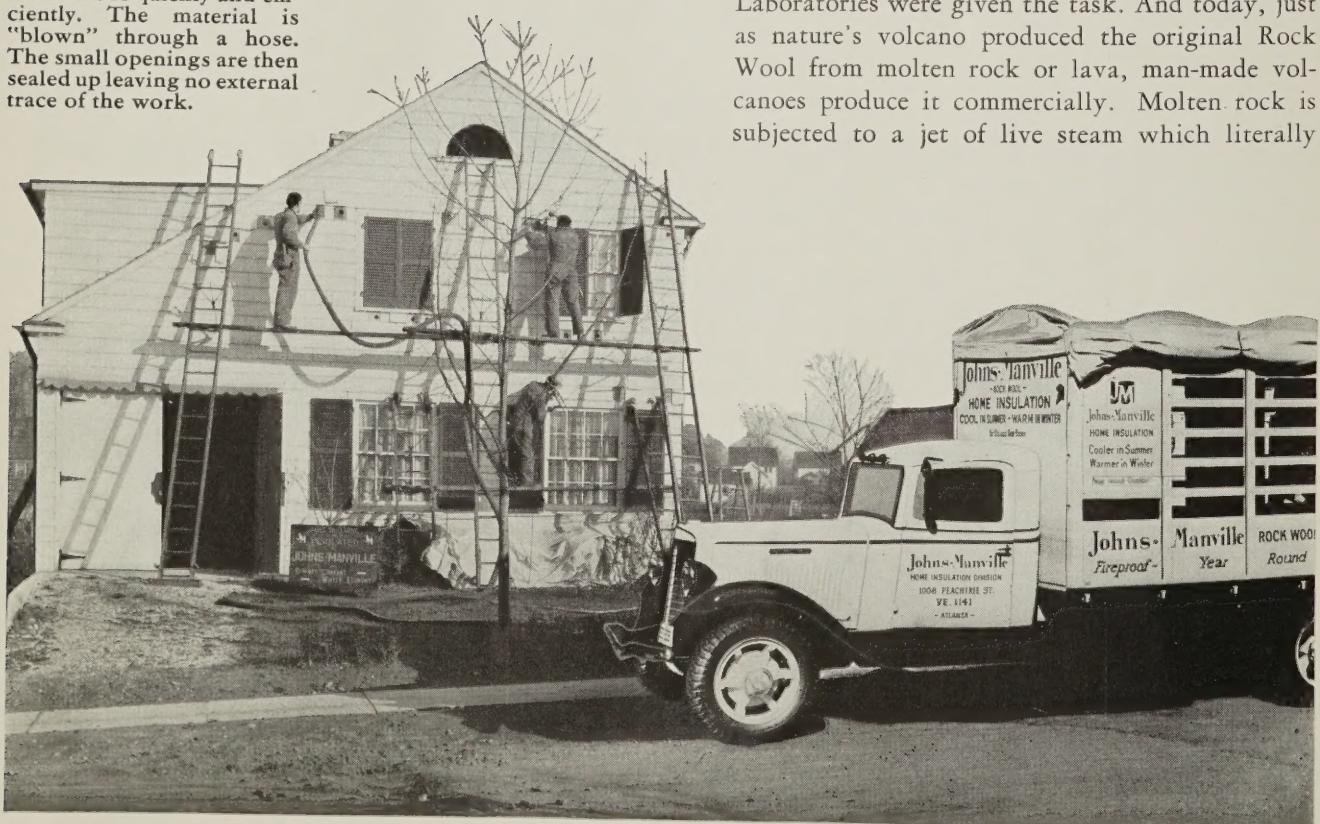
BEFORE home insulation became a practical thing, a twofold problem had to be solved. An insulating *material* had to be found and a *method* developed by which this material could be installed in existing homes.

The first part of this problem was relatively easy. Nature herself provided the answer in a fluffy, wool-like mineral substance formed from molten rock by volcanic eruption. It was Rock Wool—a material whose millions of tiny trapped air cells provided a highly effective barrier to the passage of heat, and whose other natural properties, too, made it ideally suited for the purpose.

But how to duplicate nature's handiwork—how to adapt this material to the insulation of homes—that part of the problem was not so easy to solve. Scientists at the Johns-Manville Research

Laboratories were given the task. And today, just as nature's volcano produced the original Rock Wool from molten rock or lava, man-made volcanoes produce it commercially. Molten rock is subjected to a jet of live steam which literally

Trained workmen can insulate your home with J-M Rock Wool quickly and efficiently. The material is "blown" through a hose. The small openings are then sealed up leaving no external trace of the work.



This man is making the second floor rooms cooler in summer, easier to heat on less fuel in winter!



"blows" it into soft, fleecy particles containing minute trapped air cells which resist the passage of heat. These particles are then gathered together to form a material fluffy as wool, yet fireproof and permanent as the original rock from which it came. It will not rot or corrode. It is unusually light in weight, odorless, clean and easily handled.

These J-M engineers also developed an ingenious method of actually blowing Rock Wool through a hose and packing it by air pressure into the hollow spaces in the walls and attics of houses already built. Practically all the work is done from the outside—nothing within need be disturbed. This "blowing" process, developed and pioneered by Johns-Manville, is today recognized as the only *scientific* way to thoroughly insulate an existing building.

Now, almost any house can be made comfortable

Here is the way it is done. A truck equipped with special blowing equipment drives up to your house. A hose is run from the truck and the nozzle is inserted into small openings made in the sheathing of the side walls. J-M Rock Wool is blown into the hollow walls at the proper density, completely sealing them. Carefully regulated pneumatic pressure forces it into every crack and cranny. Afterwards, the small openings are carefully closed up so that your house looks just the

way it did before. All around the outside of your home this unique blowing operation is repeated until every space is filled with J-M Rock Wool Home Insulation. The attic floor and hollow pockets in the eaves and other places are insulated in much the same way.

The workmen who do this job are experts—carefully trained. They work quickly, efficiently and without muss or disturbance. They leave the house looking exactly as it was before, but what a difference in comfort! Rooms up to 15° cooler on hottest summer days. Warmer and uniformly heated in winter—fewer drafts—fewer snuffles—and—*lower fuel bills*. J-M Home Insulation starts paying for itself the moment it is applied—and continues to return dividends in fuel savings and increased comfort with each passing year.



Natural Rock Wool was found first in the Hawaiian Islands—the product of eruptions from the volcano "Kilauea".

AND now YOUR HOME



ALWAYS
SNUG and WARM
IN WINTER



A home insulated with J-M Rock Wool heats more easily and economically, even in the bitterest winter weather.

When a home is J-M Insulated, the rooms heat more uniformly, and thus reduce the drafts which ordinarily spell colds and ill health to children as well as adults. Youngsters are guarded against the danger of cold air sweeping along the floor.



The whole family will enjoy home life in the winter as never before, when all the rooms are cozy and warm, upstairs as well as down. Grandma, especially, is grateful for the benefits brought by J-M Rock Wool, while dad finds an additional advantage in substantial reductions in his monthly fuel bills.

WILL BE *Comfortable!*

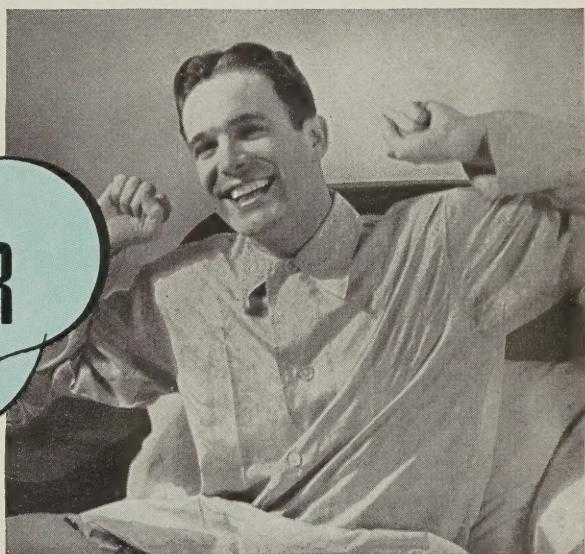


Sweltering, sleepless nights become a thing of the past, when J-M Rock Wool guards against the heat of the sun.

UP TO
15° COOLER
IN SUMMER



J-M Home Insulation is a particularly worth-while investment from the baby's point of view—although everyone in the family notices how much easier it is to start the day cheerfully when meals are served in an atmosphere of cool comfort, and when nerves are relaxed after a night of restful sleep.



You awake with renewed zest after a full night of refreshing slumber—for J-M Rock Wool has thoroughly done its job of preventing the home from absorbing unwanted heat during the day and holding it in at night.



Comfort is only a

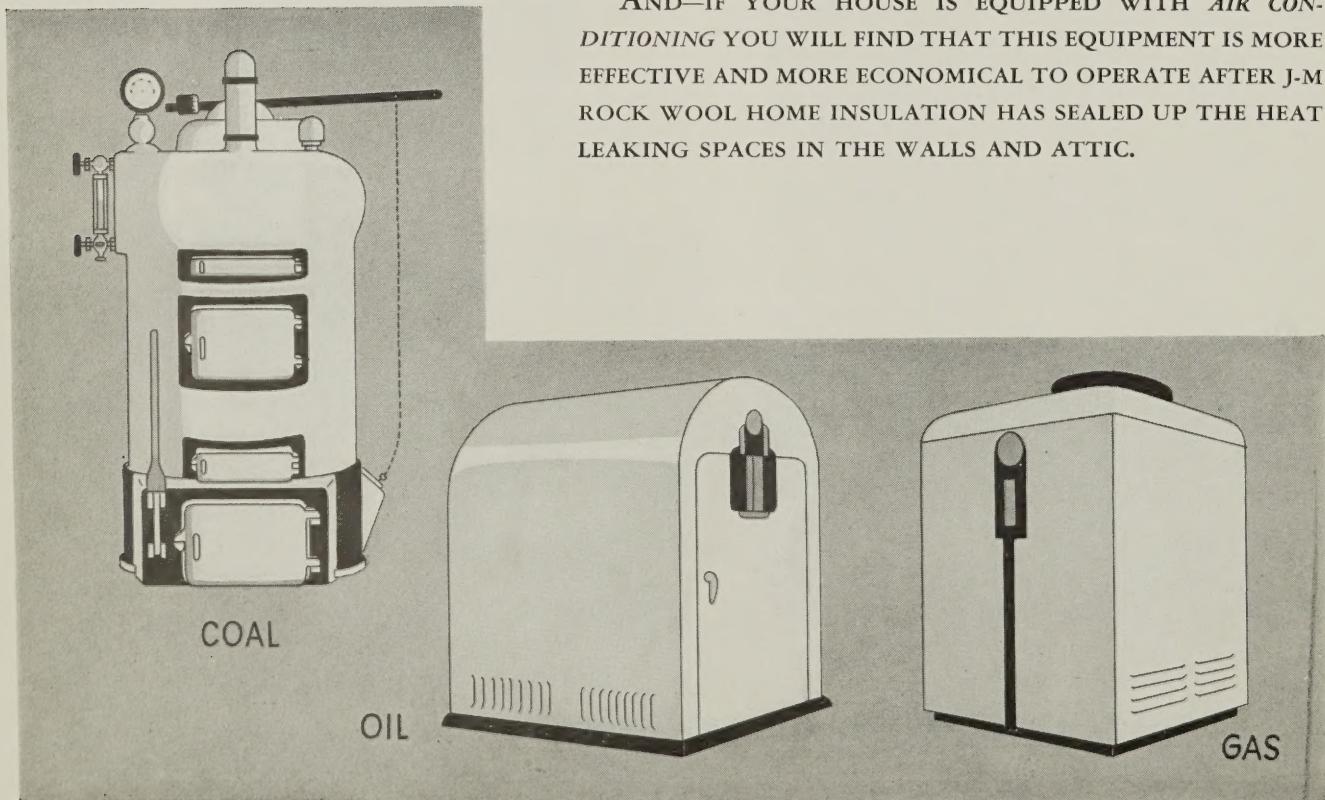
YOU WILL SAVE UP TO 30% IN WINTER FUEL EVERY YEAR!

JOHNS-MANVILLE Home Insulation is not only a comfort—it's an economy. You're paying for it right now even if you don't have it—paying for it in the extra fuel you consume every winter—fuel that is wasted because heat escapes through walls and roof into the great outdoors. Savings of up to 30% are not uncommon in J-M insulated houses. Ask any owner!

It's like a yearly refund on your fuel bill. Whether you heat your house with coal, oil or gas this sizeable saving can be yours. Figure what such a saving would mean to you—not just for one year alone, but year after year, as long as your home stands. Here's a continuous dividend-paying investment.

But in addition to saving fuel, your house can be uniformly heated—comfortable temperatures upstairs and down, with no cold spots! No more hard-to-heat rooms. Fewer drafts. Children can play on the floor safely in any room of the house. At night your house will not chill so rapidly and in the morning it will warm up much more quickly.

AND—IF YOUR HOUSE IS EQUIPPED WITH AIR CONDITIONING YOU WILL FIND THAT THIS EQUIPMENT IS MORE EFFECTIVE AND MORE ECONOMICAL TO OPERATE AFTER J-M ROCK WOOL HOME INSULATION HAS SEALED UP THE HEAT LEAKING SPACES IN THE WALLS AND ATTIC.



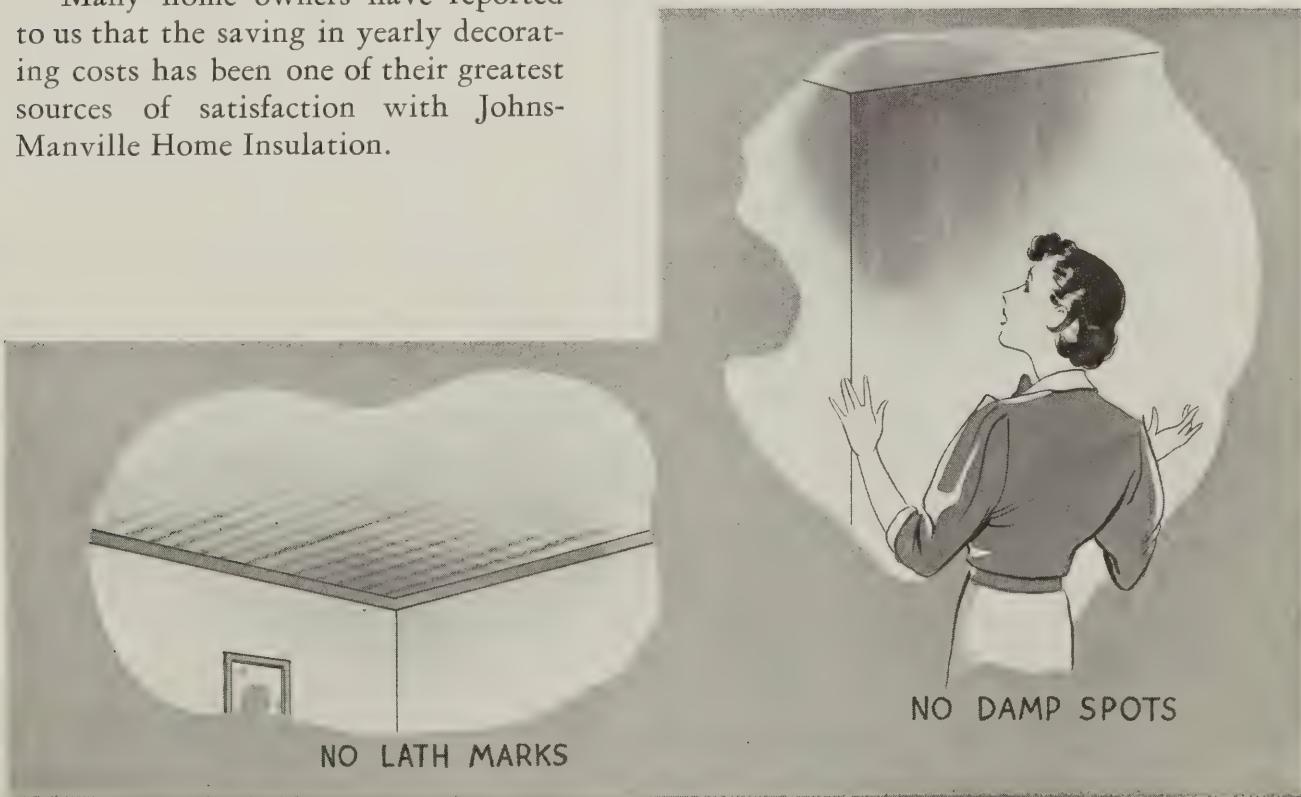
part of the story!

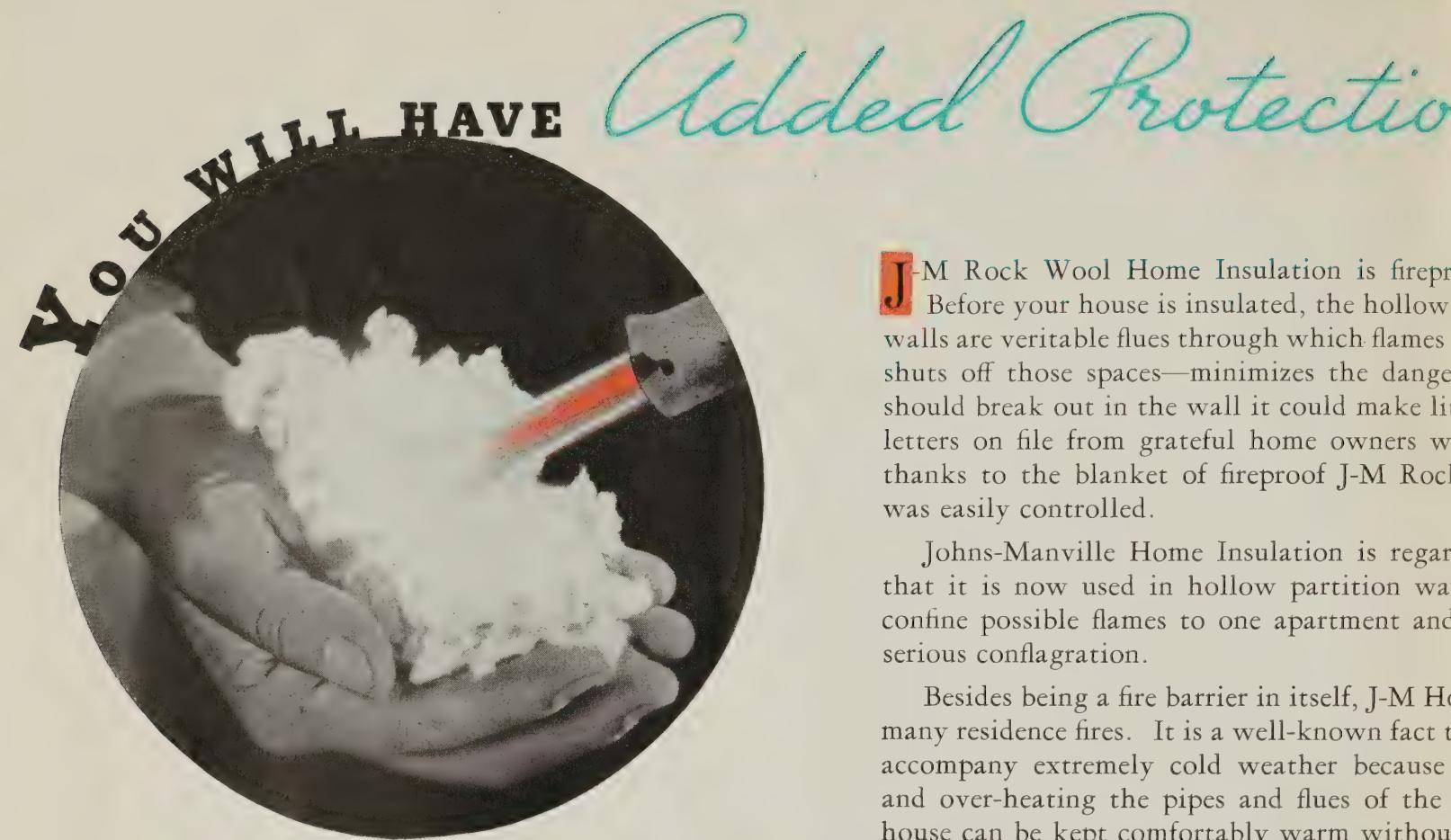
... AND YOU WILL SAVE MONEY ON DECORATING COSTS

THE reason some ceilings have dark streaks on them is easy to explain. In winter, without insulation, the plaster is cold. When you heat your house, the hot air rises, carrying moisture and dust with it. As it comes in contact with these cold plaster surfaces it deposits its moisture and dust on the plaster, causing it to turn dark. Gradually you can trace the pattern of the laths and even the floor joists right through the plaster. Such ceilings have to be painted every year, and the cause of the trouble never becomes eradicated until a thick blanket of J-M Home Insulation behind those surfaces keeps them at room temperature.

Damp or "sweating" walls are similarly caused by being cold and unprotected. When warm air strikes them on its way outdoors in an un-insulated house, it deposits moisture, causing discolorations and ruined wall paper. In a J-M insulated house, because the inner wall surfaces stay at or near room temperature, "sweating" will not occur. The cold outside air cannot reach the walls and chill them.

Many home owners have reported to us that the saving in yearly decorating costs has been one of their greatest sources of satisfaction with Johns-Manville Home Insulation.





Added Protection

J-M Rock Wool Home Insulation is fireproof. Before your house is insulated, the hollow walls are veritable flues through which flames can spread. J-M Rock Wool insulation shuts off those spaces—minimizes the danger. Should a fire break out in the wall it could make little difference. Letters on file from grateful home owners will attest to the fact that a fire in a room insulated with J-M Rock Wool was easily controlled.

Johns-Manville Home Insulation is regarded as a fire barrier. It is well known that it is now used in hollow partition walls to confine possible flames to one apartment and prevent a serious conflagration.

Besides being a fire barrier in itself, J-M Home Insulation is also a valuable factor in many residence fires. It is a well-known fact that house fires are more apt to occur during extremely cold weather because the pipes and flues of the house can become frozen and over-heating the pipes and flues of the house can be kept comfortably warm without

Chief L. V. O'Callaghan of the Southern Pines, N. C. Fire Department, found J-M Home Insulation an unexpected fire-fighter when he answered an alarm at the home of Mr. Jackson H. Boyd (lower left). Said the chief, "We found half the roof ablaze, and it certainly looked as if the house would be a complete loss. Much to my surprise, we had it under control in 20 minutes."

The large picture shows a section of an attic floor beam, burned at the top, but relatively unharmed below the level of the Rock Wool. The last view shows fibres of Rock Wool hanging between the ceiling lath, at a point where the weight of the water caused a section of the plaster to fall.



AGAINT THE HAZARD OF FIRE!

MRS FREDERICK B SCOTT
204 SUMMIT AVENUE
SYRACUSE, NEW YORK

June 29, 1931

Syracuse Home Insulation Co.,
821 Burnet Avenue,
Syracuse, N. Y.

Gentlemen:

During the night of June 24th a portion of our house was ignited apparently due to a defect in the fire place. We retired about 10 o'clock but the fire did not break through to the outside until about 5:30 the next morning. It was easily extinguished and with a very small monetary loss.

The insulation of rock wool in the wall unquestionably prevented the fire from spreading and I am sure saved us from a very serious conflagration.

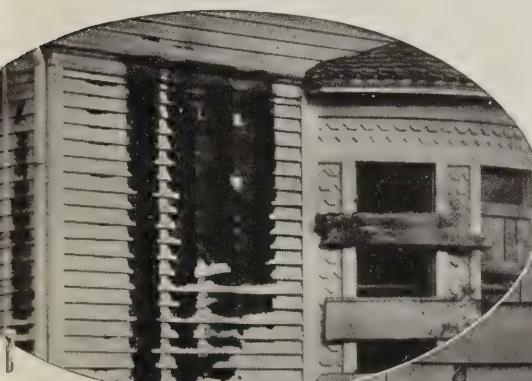
You can well imagine how thankful I am that our home was insulated with your material.

Very truly yours,
Mrs. Frederick B. Scott

of—it absolutely will not burn. spaces between the inner and outer can race. But J-M Home Insulation of insidious wall fires. If a fire little or no headway. We have many those houses have caught fire, but Wool Home Insulation, the fire

ed as such an excellent fire stop ls of multiple dwellings so as to thus prevent a general and more

me Insulation removes the *cause* of that epidemics of house fires always people are forcing their furnaces heating system. A J-M insulated having to resort to forced firing.



ese two pictures show graphically how J-M Rock Wool in walls protects the home from fire. The photo above shows what happened when fire raced forward through uninsulated walls. The photo at the right could be examined in connection with the letter from Mrs. Scott (top) who tells how J-M Rock Wool in the walls saved her home from what would otherwise have been a disastrous conflagration.



ANY KIND OF A HOUSE CAN BE INSULATED

SHINGLE



CLAPBOARD



THE pictures on these pages show how easy it is to insulate a house, whether the exterior walls are brick, stucco, shingle or clapboard. Trained workmen do the job carefully and neatly. There are no mussy alterations, no inconvenience or disturbance to the owner. Usually the work can be completed in two working days.

Before anything is done, and in order to give you the maximum benefits, a home insulation engineer surveys your home to determine just where the J-M Rock Wool Home Insulation should go. He studies the exterior walls, the construction of your roof, the overhung areas such as the roof cornice. Next he examines your attic and determines the surfaces which must be insulated. Any special construction features have his particular attention, as these areas are most important.

If your attic floor is unfinished, the J-M Rock Wool is blown between the joists and over the top floor ceiling, a full four inches thick. If the attic is floored, a few floor boards are raised and the insulation is blown under them so as to cover the entire ceiling area. If there is a room in the attic, the insulation is placed over and around it.

FLAT



THE *Johns-Manville* WAY

S T U C C O



To insulate the outer walls, a shingle, clapboard or brick is carefully removed, depending on the type of house. Then a small hole is drilled in the sheathing and a plumb bob is inserted. This is done to locate any horizontal obstructions and to determine the depth of the space to be blown.

The blowing hose is next inserted in the hole and the Rock Wool blown in until the space is completely filled. The clapboard, brick or shingle is then carefully replaced and affixed in its original position leaving the exterior wall looking just as it did. This is repeated in different parts of the house until the outer wall has been completely insulated.

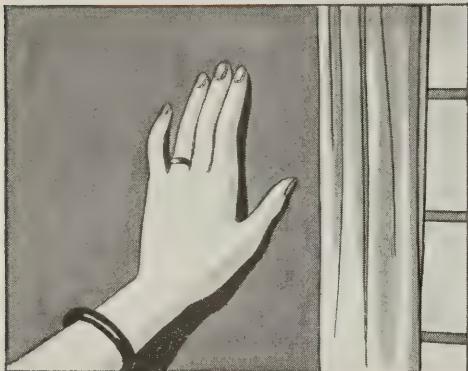
The job is not considered finished until every trace of external work has been removed and your home looks just the way it formerly did. The fact that J-M Home Insulation contractors have successfully insulated over 100,000 homes, ranging from tiny cottages to large mansions, should be ample proof of this. To further satisfy yourself on this point, however, we suggest that you inspect some of the J-M insulated homes in your neighborhood. The J-M Home Insulation contractor will be glad to give you the names and addresses of their owners.

B R I C K



ROOFS

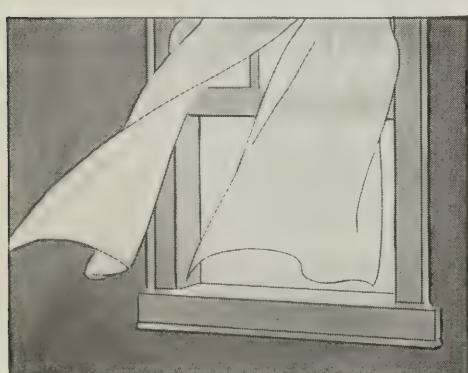
Johns-Manville **ROCK WOOL IS THE MOST EFFICIENT HOME INSULATION YOU CAN BUY**



When heat enters or leaves by traveling through the materials which form your home, the method of heat transfer is called *conduction*.



This hand is being warmed by *radiant* heat from the sun—visible evidence of the transfer of heat inside your hollow walls.



Just as the movement of air brings heat through the open window, so moving air inside your walls carries heat—by *convection*.

SINCE the purpose of insulating a house is to retard the flow of heat through the walls and roof, no insulating material can be completely effective unless it resists the three different ways in which heat passes from one area to another. The following paragraphs show how *J-M Rock Wool* resists all these ways.

CONDUCTION

1. One way that heat enters or escapes from an uninsulated house is by conduction—that is, through solids. (Place your hand against the inside of a wall that has been heated by the sun—the surface is hot because the wall is a conductor of heat.) When you surround your rooms with 4" of *J-M Rock Wool* you actually have a barrier to the passage of conducted heat equal to 11 feet of solid stone.

RADIATION

2. A certain amount of heat also enters or escapes by radiation—that is, across open spaces. For example, when you stand in the sunshine, your body is warmed by "radiant" heat. When you move into the shade you feel cooler because this radiant heat cannot strike you. When you surround your house with a 4" blanket of *J-M Rock Wool* you effectively block off the passage of heat which otherwise radiates from one surface to another.

CONVECTION

3. Another way that heat enters or escapes is by convection—that is, on air currents. The circulating air in the hollow walls and in the attic spaces of your house carries heat from warm to cold surfaces. By sealing up the hollow walls with *J-M Rock Wool* and by placing a 4" layer over the top floor ceiling, this form of heat transfer is effectively stopped.

Only Scientific Application insures Proper Density of Material

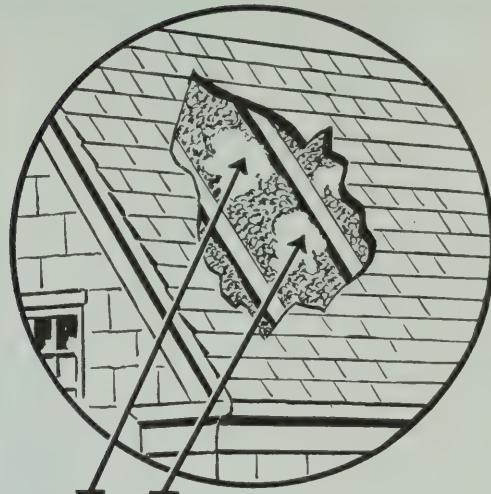
The effectiveness of an insulating material depends in a large measure on its uniformity, thickness and density. Loose, handpacked, or "poured in" types are not uniform in this respect and should be avoided. *J-M Rock Wool* is pneumatically installed under pressure and this assures you of full thickness and correct density. It surrounds the occupied portion of your house with a uniform barrier to the passage of heat. There are no voids or thin spots, no "fluffed-up" areas to mar its efficiency. Furthermore *J-M Rock Wool* cannot rot or corrode and will not settle.



If it is necessary to reach certain spaces through the roof, the opening is carefully sealed up again, leaving no visible trace of the work.

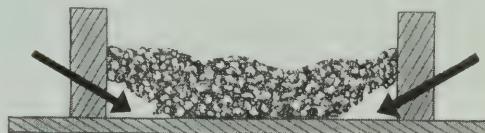
TRAINED WORKMEN ASSURE YOU OF A THOROUGH JOB

If you wish to enjoy the maximum benefits of home insulation it is important that the insulating material *completely* surround the occupied area of your house. If certain surfaces are overlooked, or if through carelessness or slipshod work there are large gaps here and there, your insulation will "leak" heat and much of its effectiveness will be destroyed. The men who install J-M Rock Wool Home Insulation are trained to do a thorough job. They know how important it is to completely insulate *all* of the surfaces which surround your rooms.

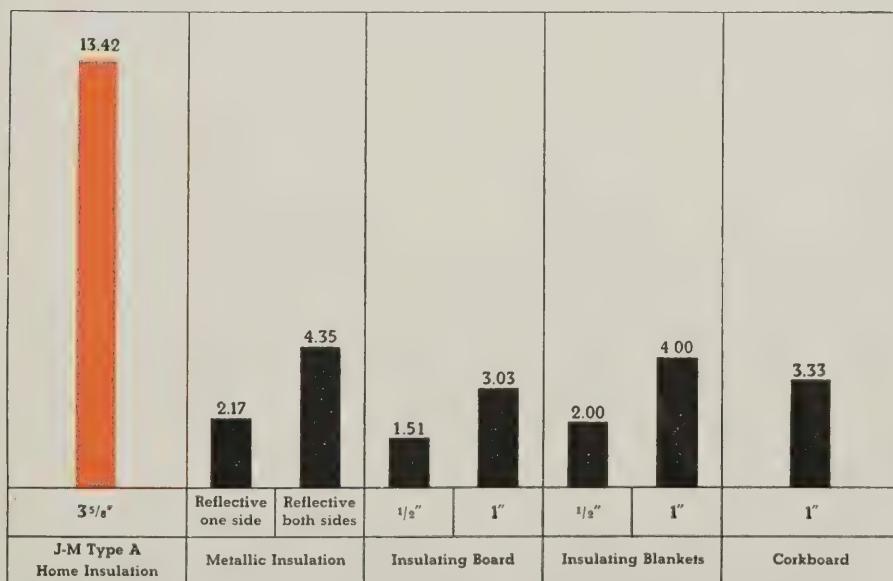


HERE IS WHAT MAY HAPPEN AS A RESULT OF CARELESS WORKMANSHIP

The diagram above shows the sloping ceiling under the roof *partially* insulated. Notice the empty spaces indicated by the arrows, caused by careless or unskilled application or faulty material. These voids lessen the efficiency of the job—allow summer heat to penetrate, winter heat to escape. The diagram below shows the space between two attic floor joists *partially* insulated. The hollows in the corner will readily permit heat to pass. It is typical of what frequently happens when "loose" or "fill-type" of insulation is carelessly spread by hand. This is a "half measure" job of insulating, and results in doubtful benefits. Insist on a Johns-Manville job for your house and avoid these possible defects.



*3 to 8 times
as effective as
ordinary materials*



Each bar in this chart illustrates the relative amount of heat stopped by the material it represents as commonly installed. The bar for J-M Rock Wool clearly demonstrates the superiority of this Johns-Manville product.

TODAY more than **100,000**



JACKSONVILLE, FLA.
*Year-round comfort
now possible.*

"J-M Rock Wool has made a marked summer reduction of temperature in our home. And although this winter was the 'record coldest,' our fuel bill was greatly reduced."

ROY N. CHELF

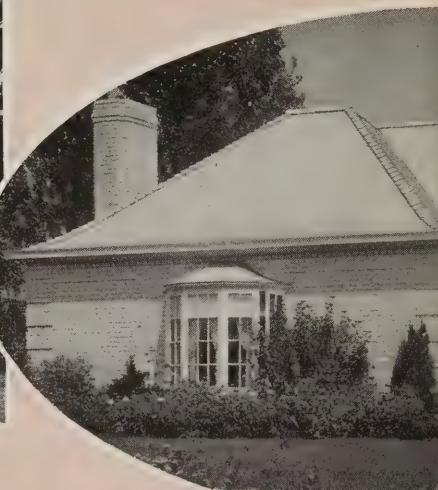


BOSTON, MASS.....*Third
floor heating problem solved.*

"Your insulation has completely solved the problem of a cold third floor. . . . Your men did the work without inconveniencing us in any way."

EDMUND S. KELLEY

Letters from satisfied users
indicate the remarkable
benefits *you* can enjoy by



PASADENA, CALIF.
*108° in the shade;
indoors 88°.*



GREAT FALLS, MONT....
20° cooler indoors.

"With the temperature over 100 degrees many days this summer, my home has never been over 80°, and is usually around 75."

ARCHIE PARKUS



WHEATON, ILL.....*Finds
4-room house easier to heat.*

"We heated our 4-room home for \$48.00, compared with \$65.00 when we did not have the insulation."

W. R. MERRITT



(Right)
PHILADELPHIA, PA.....
Insulation improves heating

"This is the first winter I have ever had satisfactory heating of my library, and I know that it is entirely due to the insulation that you installed last spring."

JUDGE HARRY S. McDEVITT



(Above)
DALLAS, TEXAS...*10° to 15° cooler.*
"Before installing J-M Insulation, the heat came through our bedroom ceiling and made it unbearably hot. Now the room is 10 to 15 degrees cooler."

W. A. BROOKS, Jr.

HOMES are J-M Insulated

having Johns-Manville Rock Wool Home Insulation installed in your home.



"During the recent hot spell when the thermometer was 108° in the shade, the thermometer inside the house showed 88°. J-M Rock Wool is giving us all the comfort claimed for it."

MRS. LINDA E. HAYES

CHICAGO, ILL.....Second floor apartment now comfortable.

"My second floor apartment which was formerly unbearable in hot weather is now comfortably cool, with a difference of 15 to 18 degrees. In cold weather, our heating bills have been considerably reduced."

HENRY G. DUMKE



(Right)

CANTON, OHIO.....Found convincing proof.

"When we substituted lap siding for stucco on our home we had the opportunity to check fully as to how the Rock Wool had been installed. We did not find a single space but what had been filled completely."

H. B. FAWCETT

(Above)
WARREN, PA.....
Results noticed in
24 hours.

"My residence was insulated during one of the most severe heat waves we have ever experienced in this vicinity. The day after the insulation was completed, there was a difference of twenty degrees between the indoor and outdoor temperatures. Your workmen did a very satisfactory and efficient job. I am very pleased to recommend J-M Home Insulation wherever I can."

R. M. KNABB

Any BUILDING CAN HAVE THE COMFORT AND ECONOMY OF JOHNS-MANVILLE HOME INSULATION

STORES

People like to shop in cool, comfortable stores—that is why thousands of merchants have insulated the ceilings of their top floor with J-M Rock Wool Home Insulation. In summer it keeps the top floor up to 15° cooler—in winter it saves up to 30% in the heating bill. In addition it increases the efficiency of air conditioning and reduces the cost of its operation.



FLAT ROOF HOUSES

The familiar flat-roofed single or duplex houses, too, benefit from J-M Home Insulation! The hollow space under the roof is like a hot radiator in summer—upstairs rooms are frequently stifling. In winter the air in this hollow is freezing cold—heated air from the rooms below escapes into it through plaster and lath ceilings. A 4" layer of J-M Rock Wool blown into this area ends this uncomfortable and expensive condition.



Two large apartment houses—typical of many which have been insulated with Johns-Manville Rock Wool Home Insulation.

APARTMENTS

The top floor apartments should be the most desirable in the house. But many landlords have trouble renting them because they are like an oven in summer—hard to heat in winter. Today thousands of apartment buildings have been insulated the J-M way—making the top floor produce a steady and attractive income the year 'round. The increase in rentals alone has been enough to pay for the job in just a few years.

* * *

Here are other types of buildings that profit by the comfort and economy of J-M Home Insulation: banks, theaters, churches, hotels, factories, libraries, public buildings, restaurants, schools, etc.

Facts **ABOUT J-M HOME INSULATION**

AS you have read the story of the advantages and economies of this new scientific method of insulating homes, many questions have doubtless come into your mind. "Just how much heat escapes through my walls and roof?" "How can insulation make my home cooler in summer?" "How much fuel can I save by having my home insulated?" "Why is J-M Home Insulation more efficient than other forms of insulations?" "What about

weatherstrips and awnings?" "How much will it cost to insulate my home?"

Below you will find the answers to these and many other questions about Johns-Manville Home Insulation. They are based on scientific facts, and on the practical experience of more than 100,000 home owners who are now enjoying the year 'round comfort and economy that J-M Home Insulation assures.

1. QUESTION: *How much heat is lost through the walls and roof of a house in comparison with the amount which escapes through windows or cracks?*

ANSWER: The proportionate amount of heat lost through these different channels varies with the size, shape, construction and location of the house. The U. S. Department of Commerce in a pamphlet on "House Insulation, its Economies and Application", gives the following figures: 40% to 60% lost through walls, floors and roofs; 15% to 30% lost through cracks; and 20% to 35% lost through windows and doors.

The American Gas Association conducted a survey of heat losses in about 400 homes and gives as a result the following as the heat losses from a "typical residence": through roof and walls 44.4%; through floors 8.8%; through cracks 20.8%; and through glass and doors 26.0%.

From the above, you can see that the heat loss through walls and roof is greater than that through any other channel. In fact, the amount of heat that escapes through walls and roof may be conservatively estimated as very nearly one-half the total loss in an average home. Only by insulation can this wall and roof heat loss be reduced and the more effective the insulation used, the greater will be the savings.

2. QUESTION: *I have always understood that the "dead air" in the wall spaces of my home was an excellent insulation. Is that not true?*

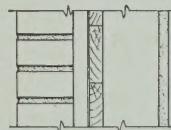
ANSWER: No. Most people have the impression that this so-called "dead air space" has a certain insulating value, like the space between the walls of a thermos bottle. It has been conclusively proved that this idea is false. The air in these spaces is not "dead air"; it is "live air", continually circulating. Minute "confined air" spaces do make excellent insulation, and the material which contains the greatest number of these per unit volume is the best insulator; but the circulating air within your walls and roof or attic floor spaces obviously does not fall in this classification.

3. QUESTION: *Isn't it true that some types of building materials have much greater insulating qualities than others?*

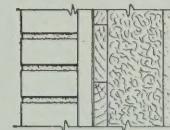
ANSWER: Yes, buildings vary in insulating qualities depending on the materials of which they are constructed. This is shown in the accompanying diagram. But notice that the insulating

THESE DIAGRAMS SHOW THE IMPROVED INSULATING EFFICIENCY OF DIFFERENT TYPES OF WALL CONSTRUCTION AFTER TREATMENT WITH J-M ROCK WOOL

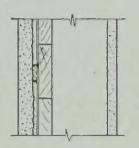
UNINSULATED



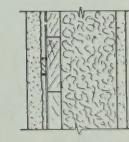
J-M INSULATED



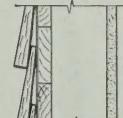
BRICK VENEER
77.8% more efficient after insulation.



STUCCO
78.7% more efficient after insulation.



CLAPBOARD or SHINGLE
75.6% more efficient after insulation.



efficiency of all of these different materials is far less than 4" of J-M Rock Wool Home Insulation. In fact, it would require a solid stone wall 11 feet thick to equal 4" of J-M Rock Wool as an insulator against the passage of heat.

4. QUESTION: *How about weatherstrips and storm windows?*

ANSWER: By weatherstripping doors and windows you can reduce to a minimum the drafts caused by outdoor air blowing in through these cracks. Storm windows or double glass windows will also have an appreciable effect on the heat lost through glass. They are almost essential in colder parts of the country.

But neither weatherstripping nor storm windows will of course have any effect on the heat that escapes through the walls and roof of your home.

5. QUESTION: *How about awnings and shutters?*

ANSWER: By acting as a shield to keep radiant heat from passing through the glass in windows, awnings and shutters will affect the temperatures within a house by materially reducing such heat as passes directly through the glass. But only by insulation can you reduce the amount of heat that comes in through the much larger area of walls and roof combined.

6. QUESTION: *Why is J-M Rock Wool Home Insulation such an effective insulating material for my home?*

ANSWER: The unusually high insulating value of J-M Home Insulation is due to countless tiny confined air cells which are entrapped in it. There are literally millions of these invisible air cells in each cubic inch of Rock Wool as it is packed between the walls and under the roof of your home. The passage of heat through such a structure is effectively blocked. Convection and radiation losses are practically eliminated.

A simple, but convincing test is to take two cubes of ice of equal size. Roll one up in a ball of J-M Rock Wool and place it in a saucer. Put the other ice cube in another saucer and place the two saucers side by side. When the unprotected ice cube has completely melted away, unwrap the "insulated" one. You'll be amazed to see how little it has melted—J-M Rock Wool has kept heat out.

Obviously, it will be just as difficult for the heat to get through your walls and attic floor when a blanket of this same Rock Wool nearly four inches thick entirely surrounds your home.

7. QUESTION: *Is it true that J-M Home Insulation will actually reduce the fire hazard in my home?*

ANSWER: Yes, not only is this Rock Wool insulation fireproof (not merely fire-resistant), but the method by which it is installed removes one of the most common causes of home destruction—those same air spaces which rob your home of heat and comfort. In case of fire, these spaces act as veritable chimney flues through which flames pass from room to room and floor to floor. Statistics from the

National Board of Fire Underwriters show that fires due to "defective or overheated chimneys and flues" rank first among the causes of residential fire losses. Many of these fires spread through outer walls and attics and under roofs.

When your home is insulated with J-M Home Insulation, the spread of fire through walls and roof or attic air spaces is effectively stopped.

8. QUESTION: *What effect will J-M Home Insulation have on drafts?*

ANSWER: Drafts in a home arise from two different causes: a direct inrush of air through cracks, generally around a window or door, and air currents set up within rooms due to unevenness of temperature at different levels. Cold walls act on the air in contact with them causing a circulation within the room with consequent drafts. Insulation keeps the walls warm thus tending to prevent these internal drafts and to create a condition of even temperature throughout the whole house.

9. QUESTION: *Is there any possibility that the insulation may settle within my walls?*

ANSWER: No. Exhaustive laboratory tests have proved conclusively that when the insulation is installed in accordance with the Johns-Manville method, it will not settle. The J-M Home Insulation Contractors follow this method to the letter and when they have completed the job of "blowing" your home, every cubic inch of Rock Wool within your walls is packed to the required density. It should be emphasized, however, that a "fill" type of insulation must be properly installed in order to obtain these results. It requires considerable training and the use of special equipment to do the work right, which is the reason Johns-Manville has been so careful in the appointment of its approved Home Insulation Contractors. You may have complete confidence in the ability of these men to do a satisfactory job in every way.

10. QUESTION: *Will the insulation have any effect on pipes inside my walls and is there any danger of short-circuiting electric wires?*

ANSWER: Tests by the Underwriters' Laboratories show J-M Home Insulation to be non-combustible, non-corrosive, chemically neutral and a non-conductor of electricity. Its use in hollow spaces of walls and floors wired by the standard wiring methods has been approved.

11. QUESTION: *Is it safe to put the added weight of J-M Home Insulation on the top floor ceiling underneath the attic floor?*

ANSWER: It is recommended that J-M Home Insulation be installed not to exceed seven pounds per cubic foot in weight, or about two

and one third pounds per square foot of ceiling area. This is so far below the "factor of safety" for the load which a lath and plaster ceiling will support, as to be practically negligible.

12. QUESTION: *Can J-M Insulation be used in a house being built?*

ANSWER: Yes. It can be installed while the house is being built just as effectively and with the same results as in any existing home. If you are planning to build, Home Insulation may also make it possible to materially reduce the size of the heating equipment and radiation which would be necessary without insulation. This saving is an appreciable part of the cost of the work, entirely aside from the yearly savings in fuel.

13. QUESTION: *I understand that I will get the most comfort and economy from insulating my roof or attic. Why should I insulate my walls as well?*

ANSWER: The answer to the proportionate savings through insulating the roof or attic only, depends entirely upon the style, size, geographical location, and construction of your house. There has been much misinformation on this subject, often crediting roof insulation alone with impossible savings. It should be obvious that the proportion of roof to wall area (exclusive of windows and doors) must always be taken into consideration.

A low rambling bungalow will certainly have a greater heat loss through the roof than will a two or three story home on a fifty or seventy-five foot lot.

Insulating your roof or attic floor with J-M Home Insulation will certainly add to your comfort and reduce your fuel bills. But only by completely surrounding your home with a barrier of thick J-M Rock Wool can you enjoy the full degree of comfort and economy which J-M Home Insulation can give you.

14. QUESTION: *How long will it take to insulate my house?*

ANSWER: That depends upon the size of your

home and the type of construction. A couple of days is generally sufficient to completely finish any average home.

15. QUESTION: *Do I have to make any preparations or move anything in the house before you can insulate my home?*

ANSWER: Absolutely not. The workmen do not have to enter your home except for preliminary inspection and when insulating the attic. Practically all the work is done from outside.

16. QUESTION: *Is there any necessity for cleaning up or redecorating after the job is done?*

ANSWER: There is none. Your house inside and out is left in the same condition as it was before. Moreover, special care is taken to protect lawns, vines and shrubs from damage during operations.

17. QUESTION: *How much will it cost to insulate my house with J-M Home Insulation?*

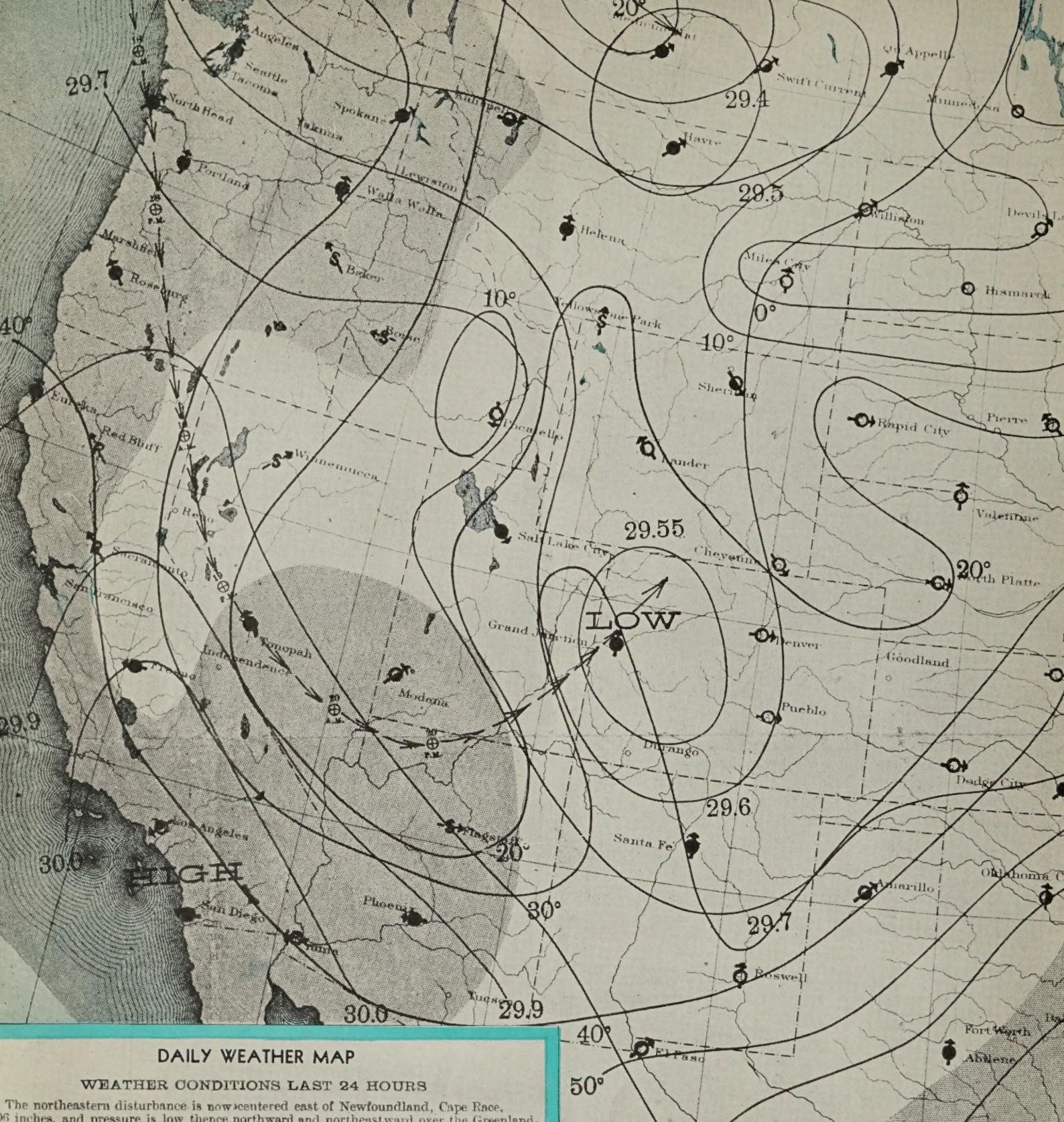
ANSWER: This question can only be answered after making a survey of your house. "Blowing" a home is a "made-to-order" job, and the size, shape and construction of each home must be carefully checked.

To find the cost of insulating your home, ask the man who gave you this book to arrange for a free survey and estimate. This will cost you nothing, nor obligate you in any way. After all, it is the only real way to answer this question, and find the cost of lasting year 'round home comfort and reduced heating expenses with each new winter.

And remember this. Even now, without the benefits of J-M Home Insulation you are paying for this modern home improvement. You pay for it in heat that leaks out through your walls and roof—money that is literally wasted in heating all outdoors. But once your home is insulated, you put a stop to this unnecessary waste immediately and your investment is quickly returned in reduced fuel bills and increased comfort.

INSULATE NOW.. PAY IN MONTHLY INSTALLMENTS UNDER THE EASY TERMS OF THE J-M MILLION- DOLLAR-TO-LEND PLAN

There is no reason to postpone the comfort and economy you can enjoy through J-M Home Insulation. In fact, today you are paying for it without having its benefits, because of the extra fuel you consume every winter. Now, under the convenient terms and reasonable rates of the famous J-M Million-Dollar-to-Lend Deferred Payment Plan, you can have the work done and pay in easy monthly installments. Ask the J-M Home Insulation Contractor for details of this plan which enables you to buy year 'round comfort and economy as conveniently as you purchase an automobile, electric refrigerator, radio and many other things.



DAILY WEATHER MAP

WEATHER CONDITIONS LAST 24 HOURS

The northeastern disturbance is now centered east of Newfoundland, Cape Race, 6 inches, and pressure is low thence northward and northeastward over the Greenland and area.

Colorado, Grand
Iaska Friday n
erta, 29.30 in
8 inches.
annah, Ga., 2
antic City, N
n has fallen
ward to the
snow or rain
ily heavy in
the Middle At
ward to the
es and betwe
ails from the

General Forecast for the Atlantic States, the lower Lake region, the Ohio Valley, and Tennessee: There will be much cloudiness during the next 36 hours occasional rain is indicated, except in portions of the South Atlantic States. The temperature will rise in the Ohio Valley, the lower Lake region, and the Middle Atlantic

Brownsville